

# Management practices and operations



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The Canbide Corporation is a multi-national, publicly traded (NYSE), US - based manufacturing company dealing in petrochemical products. Two years ago it purchased a leading Korean electronics company. At present the company has manufacturing, distribution and marketing problems as its two product groups are heterogeneous in nature. For our study we have selected three key issues summarized as below:

1. Customer service problems at the Denver facility.
2. Production facilities in the Pacific Northwest Oregon not working effectively.
3. Copier rehab facility near Charleston, SC difficult labor and material planning situation.

Detailed Analysis.

1. Customer service problems at the Denver facility:

1. 1 Problem identification:

First, customers desiring to pick up multiple products must now drive from point to point within the plant to pick up each product. There are often waiting lines at each loading point. A second problem is the arrival pattern of trucks to pick up products that materially contribute to gridlock within the facility.

1. 2. Identifying the alternatives:

The company has identified various factors that can affect the customer satisfaction because of waiting time and provide a framework for showing managers which of these factors are under their control. The main solution for the problem lies in the queuing or waiting line models.

1. 2. 1 Queuing theory or waiting line theory is primarily concerned with processes characterized by random arrivals (i. e., arrivals at random time

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intervals); the servicing of the customer is also a random process. If we assume there are costs associated with waiting in line, and if there are costs of adding more channels (i. e., adding more service facilities), we want to minimize the sum of the costs of waiting and the costs of providing service facilities.( Queuing models – waiting lines).

1. 2. 2 Service managers can design their operations and train their employees to provide faster service without incurring any additional costs.

1. 3 Determine the evaluation criteria:

We can use mathematical formula or computer simulation. Computer simulation is more expensive and slower than using mathematical formula since it involves building customizing models for the system.

1. 4 Choose the alternatives:

In the case of Canbide Corporation we will utilize mathematical formula for solving the waiting time of customers running helter skelter for collecting different products.

2. Production Facilities in the Pacific Northwest Oregon not working effectively:

2. 1 Problem identification:

Production facility of the company is not effective because of rise in scrap value and cost of production and inventory.

2. 2 Identifying the solution:

A fish bone chart is drawn up to identify the alternatives.

The diagram focuses on the causes rather than the effect, because there may be a number of causes for a particular problem. This technique helps us to identify the root cause of the problem in a structured and uncomplicated manner. It also helps us to work on each cause prior to finding the root

cause. (Applying the fishbone diagram and Pareto principle to Domino, 2004).

### 2. 3 Determine the evaluation criteria:

The reasons for the higher production cost was identified as frequent breakdown of machinery, poor plant layout, and high ordering cost and inventory carrying cost.

### 2. 4 Choose the alternatives:

“ Breakdown maintenance is reduced to the minimum by resorting to planned/ scheduled maintenance. And computerized software is used to redesign the plant layout to minimize handling cost. ABC analysis is carried out to reduce the inventory carrying cost. When carrying out an ABC analysis, inventory items are valued (item cost multiplied by quantity issued/consumed in period) with the results then ranked. The results are then grouped typically into three bands. These bands are called ABC codes.” (ABC analysis, 2009).

### 3. Copier rehab facility near Charleston, SC difficult labor and material planning situation:

#### 3. 1 Problem identification:

The stocks are not meeting the requirements, or in other words, stocks which are in frequent demand are not stored in sufficient quantities. Production planning is difficult because of uncertainty in demand and it leads to unnecessary labor and material cost.

#### 3. 2 Identifying the alternatives:

When applied to material in VED analysis we try to identify material according to their criticality to the production, which means the material, without which the production will come to stop and so on. From this point of

view materials are classified into three categories. (Materials management – Selective control, 2005).

### 3. 3 Determine the evaluation criteria:

In ABC analysis the thrust is on total inventory carrying cost but in VED analysis the thrust is on the vulnerability even when the cost is very low. By stocking vulnerable components customer's demand can be met in full.

### 3. 4 Choose the alternatives:

The vital components required by the customers are to be stocked irrespective of the cost. By scientific forecast/ linear programming/ regression analysis demand can be reasonably assessed.

### References

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